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NOTE ON AN EOCENE CRAB

Harpactocarcinus mississippiensis Rathbun

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CURATOR OF FOSSIL INVERTEBRATES

An incomplete but well-preserved specimen of *Harpactocarcinus mississippiensis* Rathbun was collected for Chicago Natural History Museum by William D. Turnbull and C. M. Barber in the summer of 1947. Since parts of the carapace that are not visible on the type specimen are visible on this one, the specimen is illustrated and compared with Rathbun's original description.

Class **CRUSTACEA**

Family **Xanthidae** Alcock

Genus **Harpactocarcinus** Milne-Edwards

Harpactocarcinus mississippiensis Rathbun

The following is copied from Rathbun's original description (1935, pp. 88-89) with new information added in brackets:

"Carapace subcircular, broader than long, convex from side to side and much more so from front to back, the anterior and the posterior margins invisible in dorsal view; surface covered with fine punctae irregular in shape and size [the flat bottoms of the punctae also punctate]; marginal teeth unknown [there are no marginal teeth]. Orbits far apart, subcircular, upper margin thickened, tubular [bearing at the outer angle a short, rounded tooth].

"Front between the orbits [sub-] triangular [concave between orbits and rostrum; rostrum prominent, two-pointed, its points separated by the width of one point], nearly three [about four] times as broad as long.

"Chelipeds massive, unequal, the right the larger. Outer surface of merus broader than long, outer surface of carpus much longer



5 cm

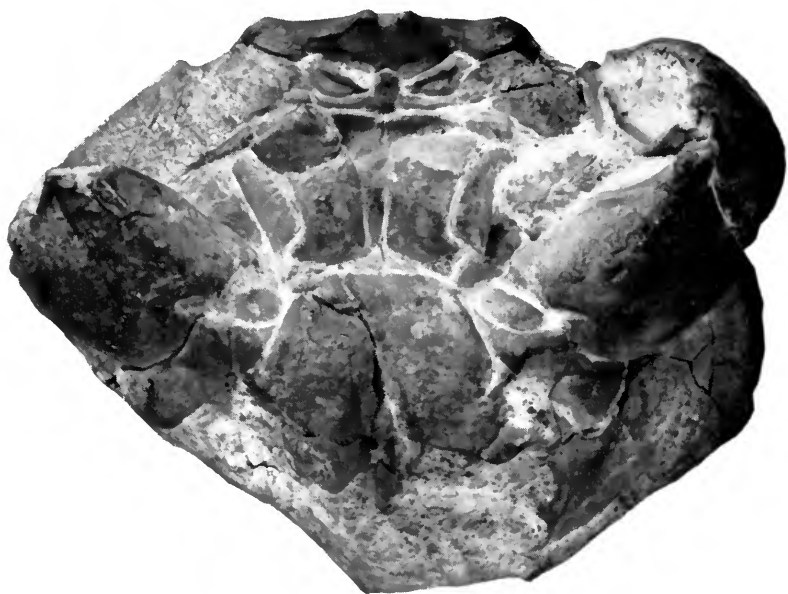


FIG. 87. *Harpactocarcinus mississippiensis* Rathbun. Above, ventral view, with left chela in place; below, ventral view, with left chela removed.

than broad. Outer surface of manus convex from upper to lower edge, [smooth or] irregularly pitted and bearing four longitudinal rows of small tubercles, one on the upper margin, the second near it but diverging a little distally; two rows further apart at middle of manus and composed of somewhat smaller tubercles. These



FIG. 88. *Harpactocarcinus mississippiensis* Rathbun; front view.

disappear in the distal part of the major manus. The number of tubercles in the various rows, beginning at the top, are as follows: Minor palm [7, 7, 9, 7]; major palm, 4+, 8, 7, 4. In the space between the second and third rows of the major palm are two groups of tubercles at either end, 4 in the proximal group and 5 in the distal; . . . [in the space between the second and third rows of the minor palm there is a group of 9 tubercles at the proximal end, while at the distal end there is a single tubercle midway between the two rows, equal in size and spacing to the 9 tubercles of the third row]. A shallow punctate groove on the fixed finger [not on our specimen] is continued a way in the palm. Fingers stout; tips blunt; fixed finger nearly horizontal, [slightly] convex below, prehensile margin slightly sinuous, in the main convex [prehensile margin straight, armed with one long and two small tubercles in the proximal part, slightly sinuous in the distal part]; dactylus curved, inner margin nearly straight, unarmed [dactylus strongly curved, bearing in the distal part of its outer margin three short rows of tubercles, continuing the first three rows of the palm; prehensile margin curved, bearing at least two very small tubercles near its distal end]. Merus of ambulatory legs broad, compressed."



FIG. 89. *Harpactocarcinus mississippiensis* Rathbun; left chela.

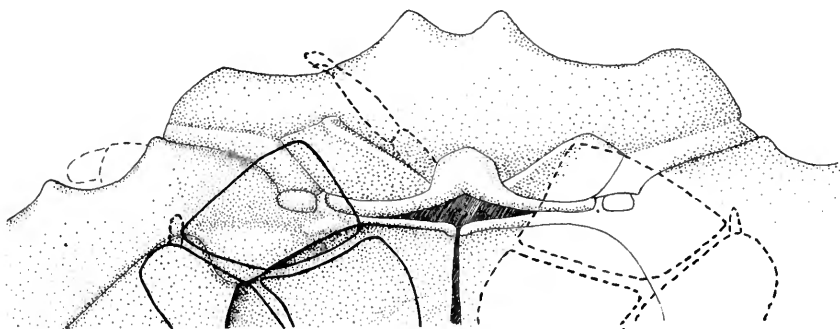


FIG. 90. Sketch of oral area of *Harpactocarcinus mississippiensis* Rathbun.

Occurrence.—The Chicago Natural History Museum specimen is from the old Cocoa Post Office locality of the Upper Eocene (Jackson) Cocoa sand (Turnbull, 1948), two miles southeast of Melvin, Choctaw County, Alabama, near the locality from which Rathbun had a right chela. It was collected in association with zeuglodon bones, corals, and foraminifera.

Referred specimen.—CNHM no. PE57. Length, about 50 mm.; width, 64 mm.; a male, slightly smaller than the holotype, a female.

Remarks.—The presence of a rostrum on the front of this specimen leaves some doubt as to the propriety of leaving the genus in the family Xanthidae, of which the diagnosis declares, in part, “front . . . never produced in the form of a rostrum” (Rathbun,

1930, p. 233); the rostrum, however, is apparently not quite so developed as in the other well-known American species, *H. americanus* (Rathbun, 1928, pl. 2) and should perhaps be considered as a pair of well-developed central tubercles, as in *H. multidentatus* Stubblefield (Stubblefield, 1946, pl. 9). The present species is unusual for the family also in lacking furrows and areolations on the dorsal surface.

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